X80 Feeder Controller

User's Manual

Version 1.0

www.buckeyecam.com

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1. Warnings

Contains FCC ID:MCQ-XBEE09P The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (*i.*) this device may not cause harmful interference and (*ii.*) this device must accept any interference received, including interference that may cause undesired operation.

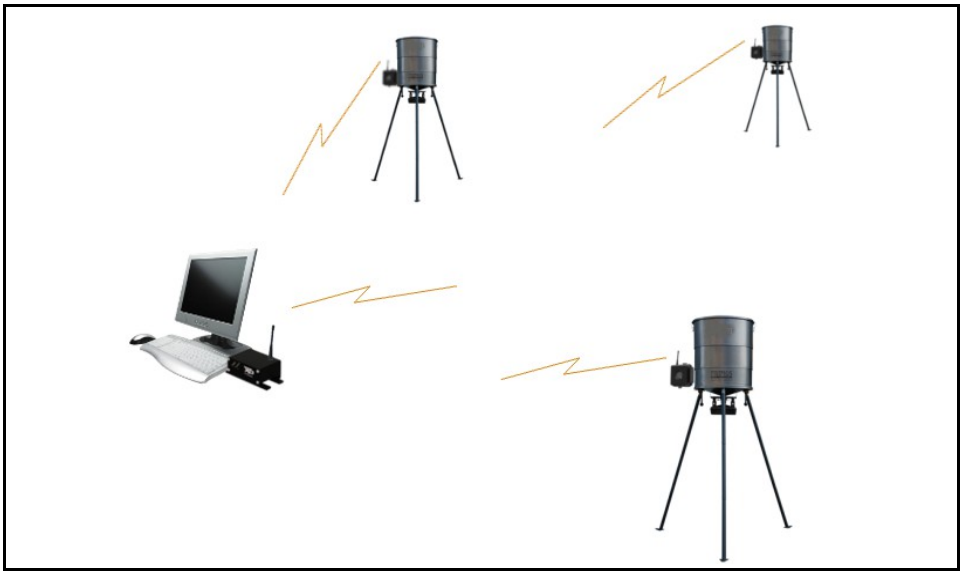
If the device is used with any antenna other than the one supplied, the system may not comply with the FCC regulation Part 15.247, Operation within the license-free band 902 – 928 MHz. Contact manufacturer regarding use of optional high-gain antennas with the X Series wireless camera system.

WARNING: To satisfy FCC RF exposure requirements for mobile transmitting devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance are not recommended. The antenna used for this transmitter must not be co-located in conjunction with any other antenna or transmitter.

WARNING: Before servicing or adjusting a feeder, always disconnect battery power to the *X80 Feeder Controller*.

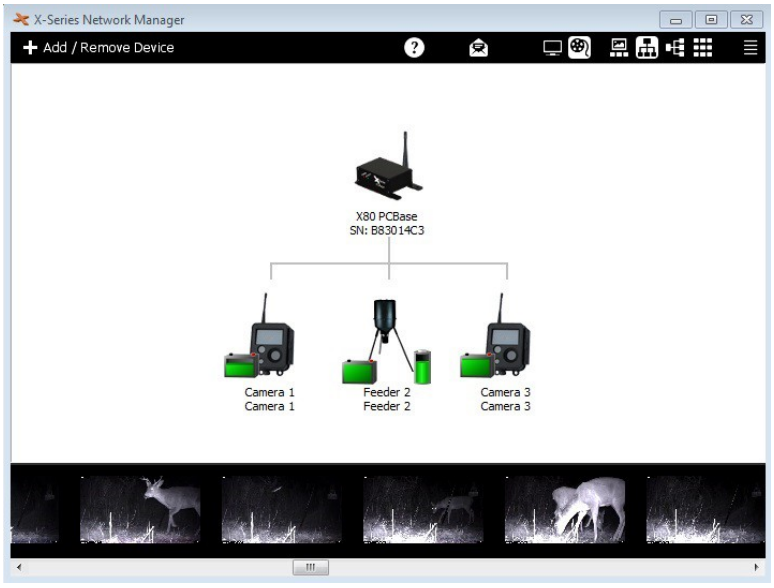
2. Overview

The Buckeye Cam *X80 Series* includes wireless cameras, sensors, repeaters, and actuators. All of the available devices work seamlessly together and may be controlled and monitored with the *X-Series Network Manager* software application. Before using the *X80 Feeder Controller*, it is important to be familiar with *X-Series Network Manager.* User's manuals and video tutorials may be found at www.buckeyecam.com/site/support.html.



The *X80 Wireless Feeder Controller* can replace the standard timer on most commonly available deer feeder kits. This will allow the feeder to be controlled and monitored wirelessly from several miles away using the *Buckeye Cam X-Series Network Manager* software application and a base receiver connected to a computer.

Using *X-Series Network Manager*, the daily feed schedule may be modified at any time and wirelessly transmitted to the feeder. The feeder can also send status alerts for low battery, blown fuse, jammed motor, or empty feeder. Up to 254 feeders can be controlled and monitored from one base.



3. Getting Started

Before installing an *X80 Feeder Controller* on a feeder, it must be registered to a base using the *X-Series Network Manager* software application. If you have not already done so, refer to the *X80 Wireless Camera System User's Manual* for instructions on how to connect to a base.

If X-Series Network Manager is installed and connected to a base, follow the steps shown below to register an *X80 Feeder Controller*.

1

Attach antenna.

Screw the antenna onto the threaded antenna connector. Do not over-tighten.

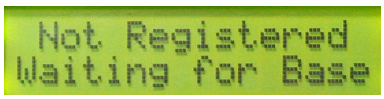
2

Install 5 AA batteries.

Remove the battery cover and install 5 AA batteries as shown. Replace the battery cover when done.

3

Wait for the LCD display to read "Not Registered Waiting for Base".



4

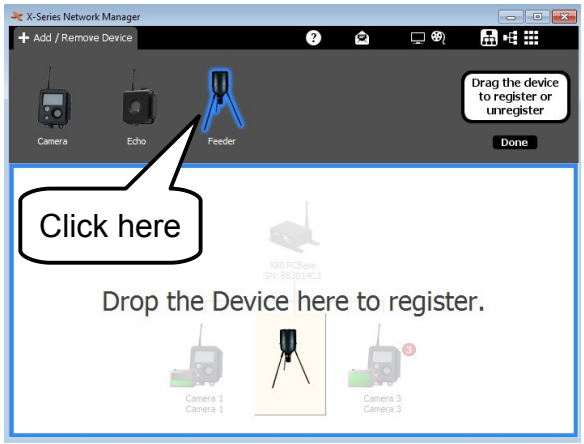
Add to X-Series Network Manager.

Click on "Add/Remove Device".

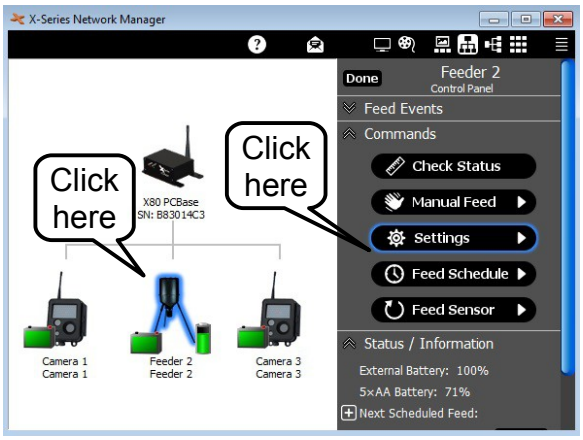
5

Click on the Feeder icon and drag it into the network view.

Once the Feeder Controller has been registered, it will be assigned a Feeder number.

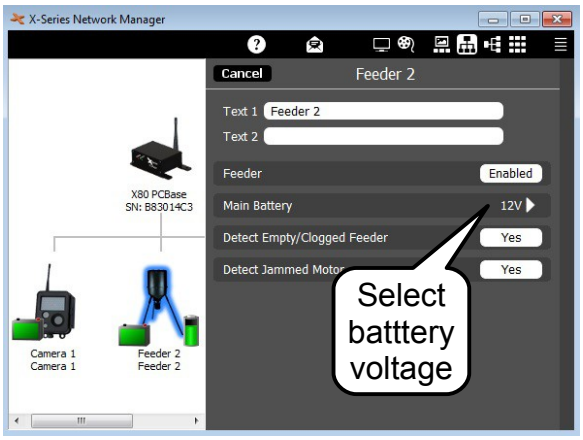


6 **Click on the Feeder icon in the network view to open the Feeder Control Panel.**



7 **Click the “Settings” button on the Feeder Control Panel.**

8 **Select the Feeder motor battery voltage (6V or 12V).**



9 **Enter optional text labels.**

Text may be entered in the Text 1 and Text 2 fields to make it easy to identify the feeder in the software. This is especially helpful if you have more than one feeder.

10 **Make sure the Feeder Enabled button is set to “Enabled”.**

The Detection options may be left to the default state of “Yes”. They may be changed later if necessary.

11 **Click Update to save the changes, or Cancel if no changes were made.**

12 **Repeat steps 1 through 11 for all Feeder Controllers.**

4. Installing the Feeder Controller

The following items are provided for wiring to the spinner motor and battery (6 Volt or 12 Volt).

Motor Power Cable ①

Inline Fuse Battery Pigtail ②

Battery Negative Pigtail ③

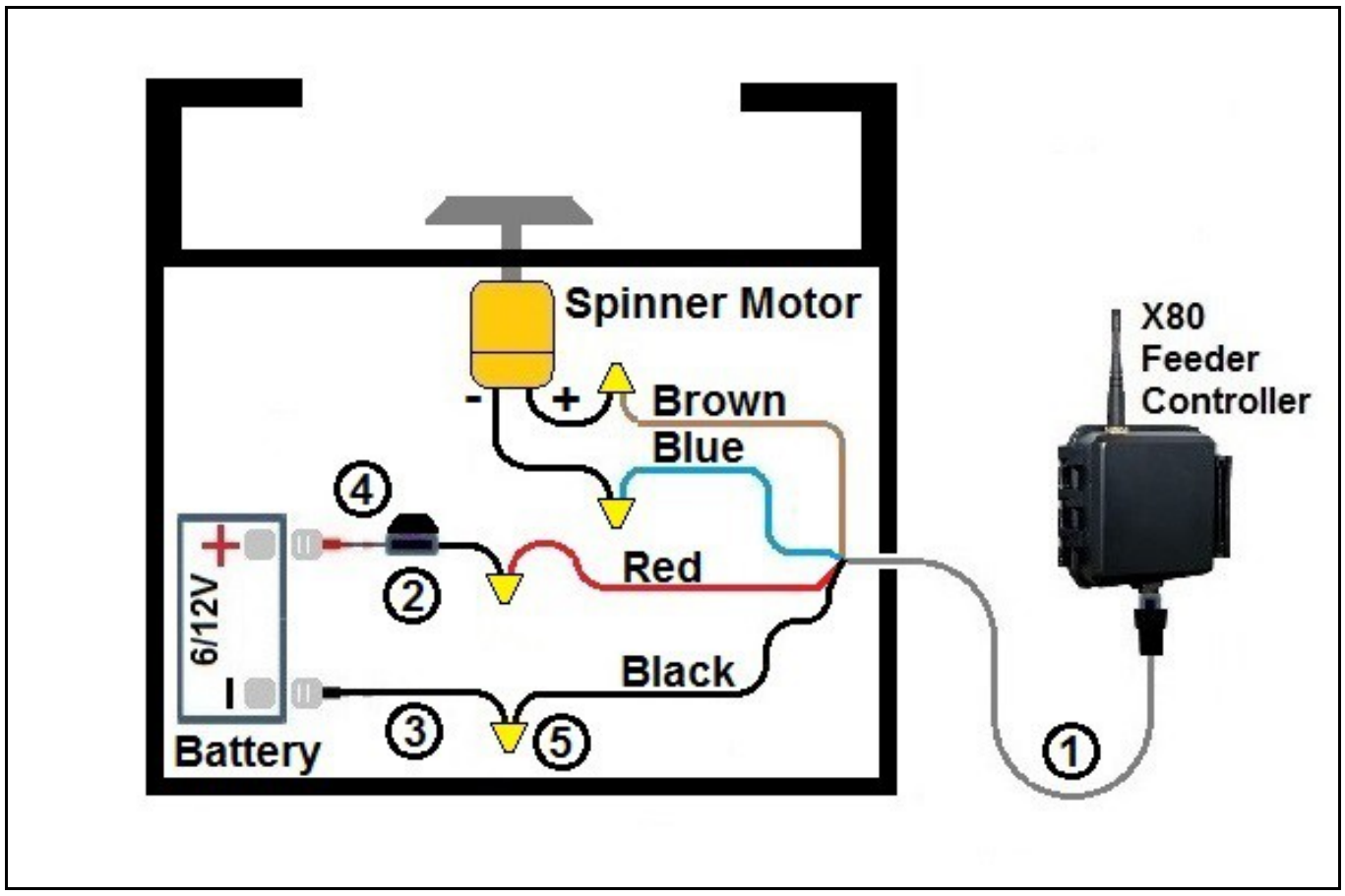
10 Amp Fuse ④

Wire Connectors ⑤

To install the *Feeder Controller* on an existing spin feeder kit:

1. Remove the existing timer.
2. Drill a hole for the *Motor Power* Cable (or use existing hole, minimum diameter of 0.3125 in.).
3. Insert the *10 Amp Fuse* into the *Inline Fuse Battery Pigtail.*
4. Make the wiring connections as shown below.

NOTE: If the motor does not turn in the desired direction, reverse the brown and blue wires. For most spin feeders, the order of connection of the brown and blue wires does not matter.



4. Installing the Feeder Controller

The *X80 Feeder Controller* is housed in a watertight, weatherproof enclosure. It may be attached to the feed hopper or motor kit using the supplied mounting bracket or a ratchet strap.

If a high gain antenna is used, it may be attached to the feed hopper using an antenna mast.

Once the *X80 Feeder Controller* is installed, it is important to perform a manual feed and do a signal check to make sure everything is functioning properly. Refer to *Chapter 5, Display and Pushbuttons* for instructions.

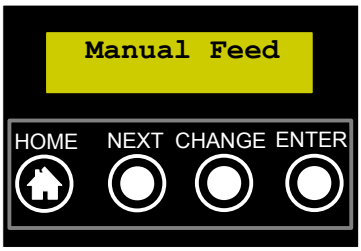
5. Display and Pushbuttons

Release the latch on the side of the *Feeder Controller* enclosure to access the LCD display and pushbuttons.

If no buttons have been pushed for some period of time, the LCD display will go blank in order to save battery power. Pushing any button will wake it up.

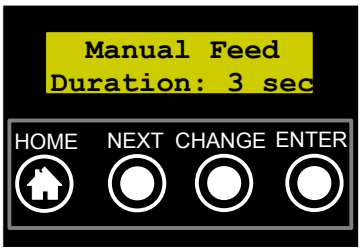
Pushing the NEXT button will always advance the display to show the next message.
Pushing the HOME button will always return the display sequence to the first message.

Manual Feed



Push the NEXT button until the display shows “Manual Feed”.

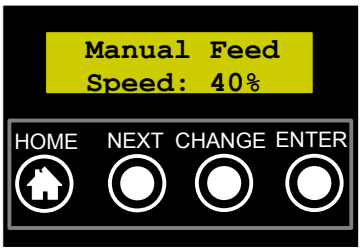
Press the ENTER button.



The display will now show the duration of the manual feed.

To change the duration, press the CHANGE button.

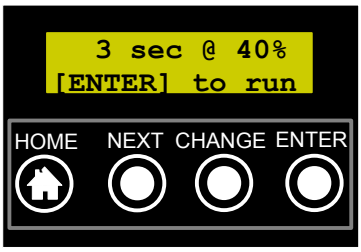
Press ENTER when done.



The display will now show the motor speed.

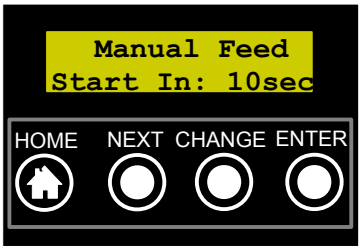
To change the motor speed, press CHANGE.

Press ENTER when done.



The display will now show duration and speed.

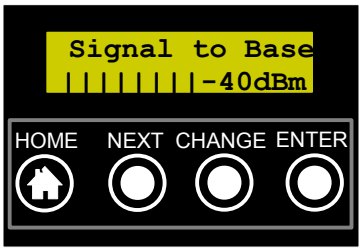
To start the manual feed, press ENTER.



The display will now start a countdown before the manual feed begins.

Stand back from the feeder!

Check Signal



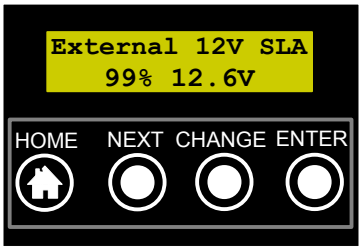
Push the NEXT button until the display shows “Signal to Base”.

After a few seconds, the display will show the signal reading.

The signal is shown in dBm and also “bars”.

If a signal cannot be obtained, you may need to upgrade to a high-gain antenna, or use a repeater (see Chapter 6, *Setting up a Repeater*).

Check Battery



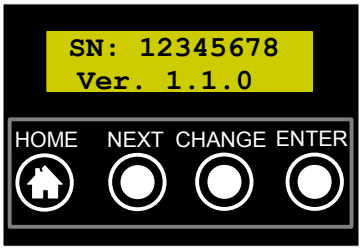
Push the NEXT button until the display shows “External 12V SLA” (see note below).

This will show the battery level of the main feeder battery.

Push the CHANGE button to see the AA battery reading.

NOTE: The display will show 12V SLA or 6V SLA depending on what battery voltage was chosen in *X-Series Network Manager*. Refer to *Chapter 3, Getting Started*.

Serial Number and Firmware Version

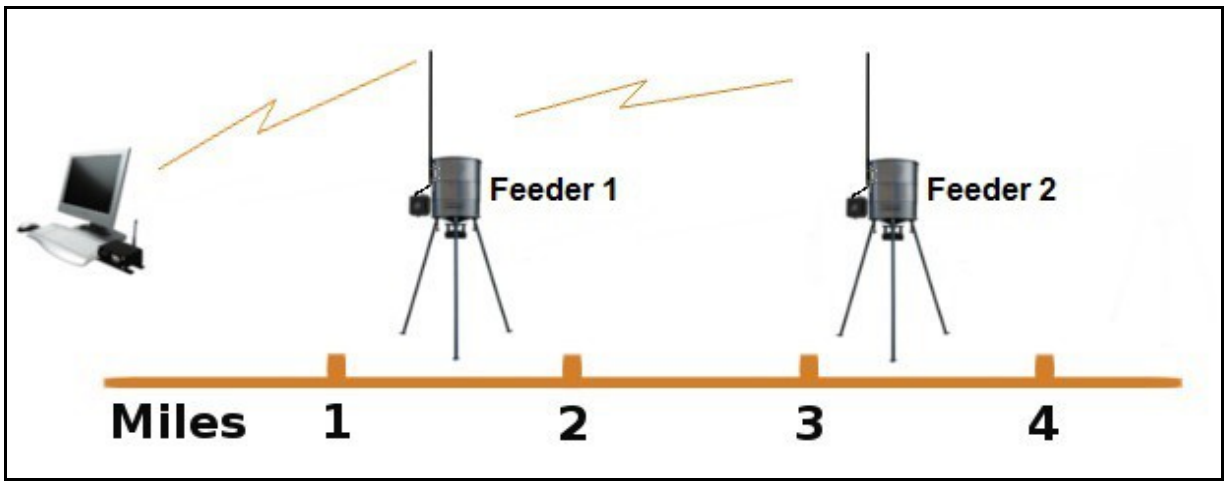


Push the NEXT button until the display shows the serial number and firmware version.

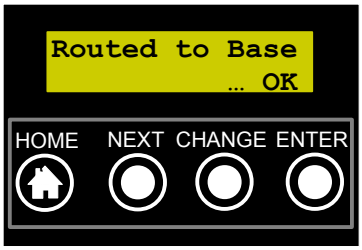
6. Setting up a Repeater

One method to extend transmission distance or overcome obstructions is to use repeaters. Every X80 wireless device may be used as a repeater (i.e. cameras, feeder controllers, Echo, etc.).

In the example shown below, Feeder 2 cannot establish a signal to the base due to a very long distance or obstructions. Feeder 1 can establish a signal to the base, so Feeder 2 is routed through Feeder 1.

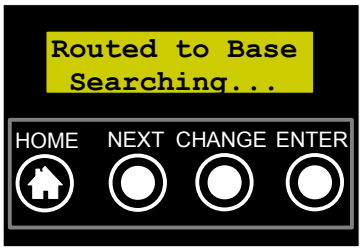


NOTE: To setup a repeater network, there must first be at least one device that can get a signal directly to the base.

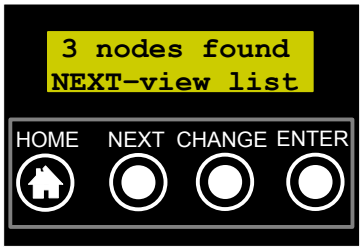


At the *Feeder Controller* that cannot get a signal to the base (Feeder 2 in the above example) ...

Open the enclosure and push the NEXT button until the display shows how the *Feeder Controller* is currently routed (Base is the default).

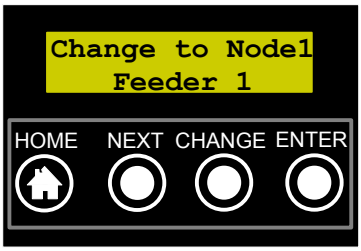


To change the routing, push the CHANGE button. The *Feeder Controller* will now search for any devices that it can get a signal from.



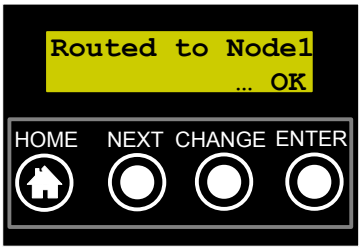
When the search is complete, the display will show the number of nodes found (if any). Push the NEXT button to view each node on the list.

6. Setting up a Repeater



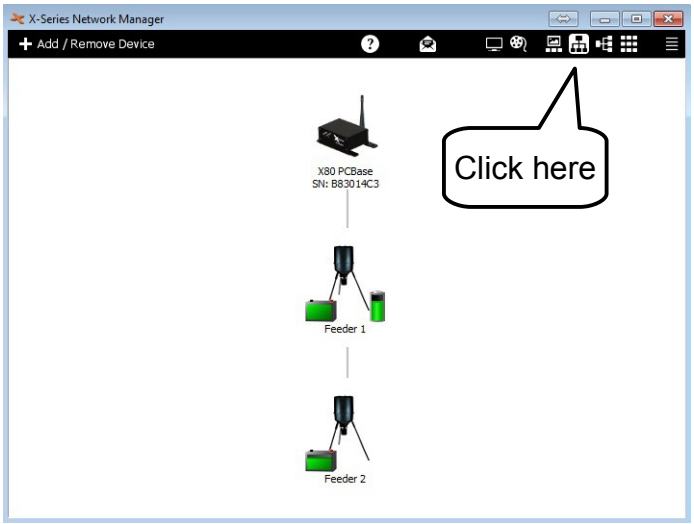
When the display shows the node that you would like to route through, push the ENTER button.

NOTE: In this example there are *Feeder Controllers* only, but if you are using *X80 Cameras* or *X80 Echos*, they may also show up on the list. Any X80 device can act as a repeater.



Now the Feeder Controller will try to contact the base through the node that you have selected. If it is successful, the display will show "...OK".

In X-Series Network Manager, click on one of the network tree view icons to see a visual representation of the routing.

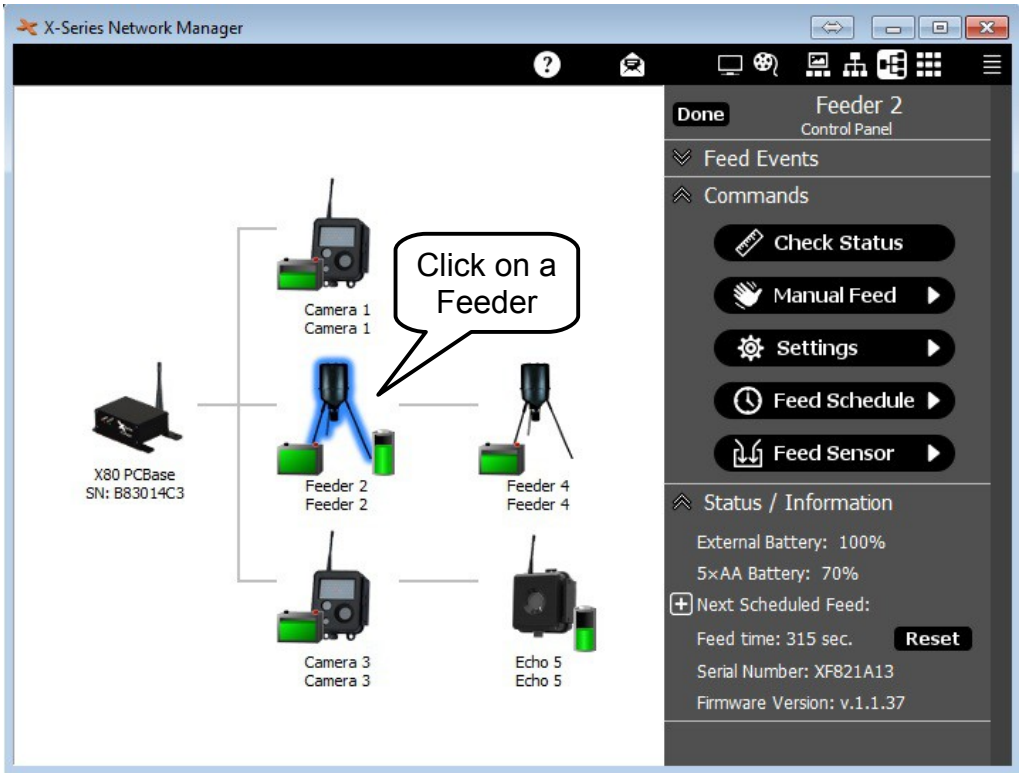


NOTE: For more information on the different types of repeater setups and antenna options see the *X80 Wireless Camera System User's Manual* available at www.buckeyecam.com.

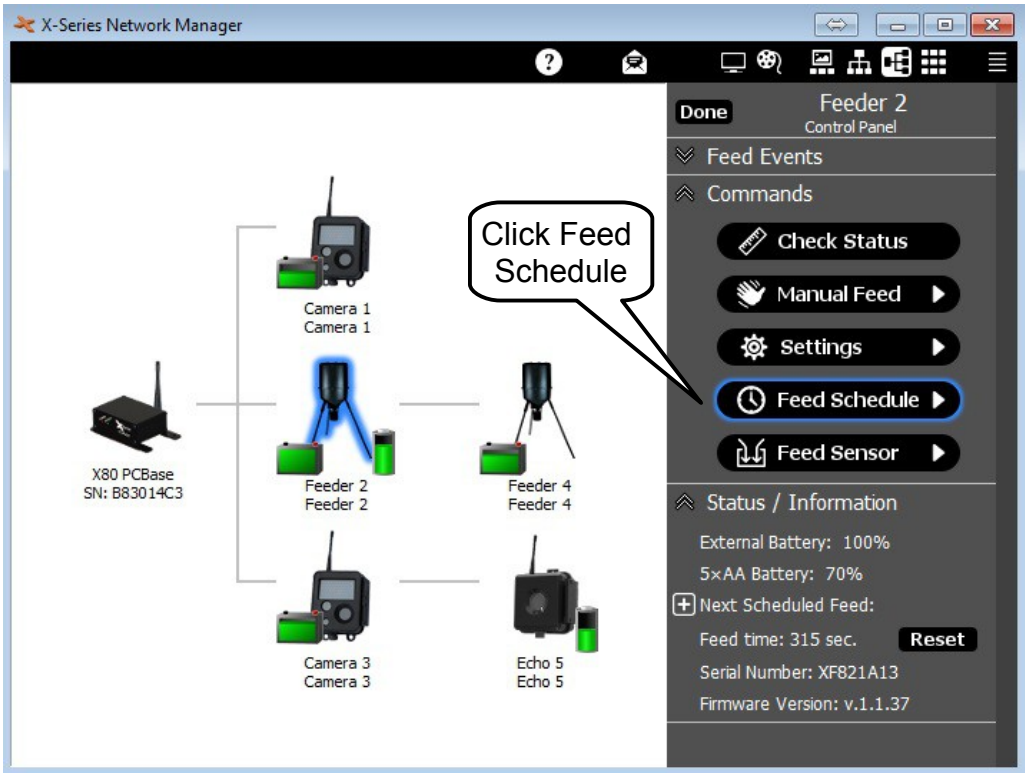
7. Feed Schedule

Standard Feed Schedule

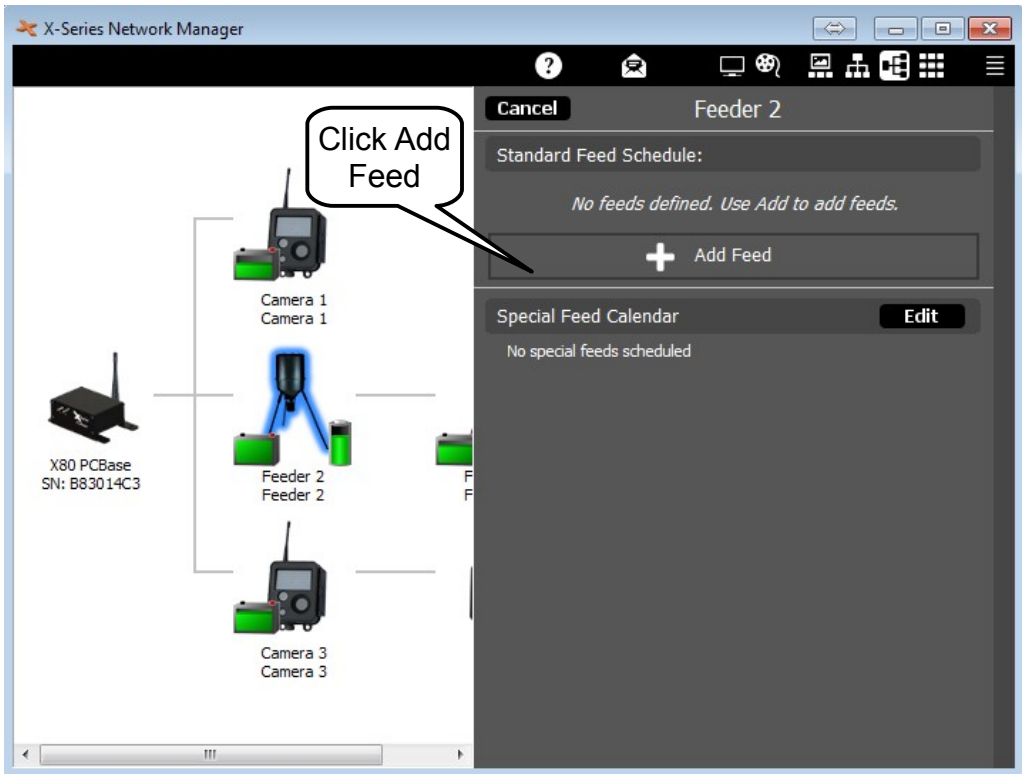
Follow the steps shown below to create a standard feed schedule.



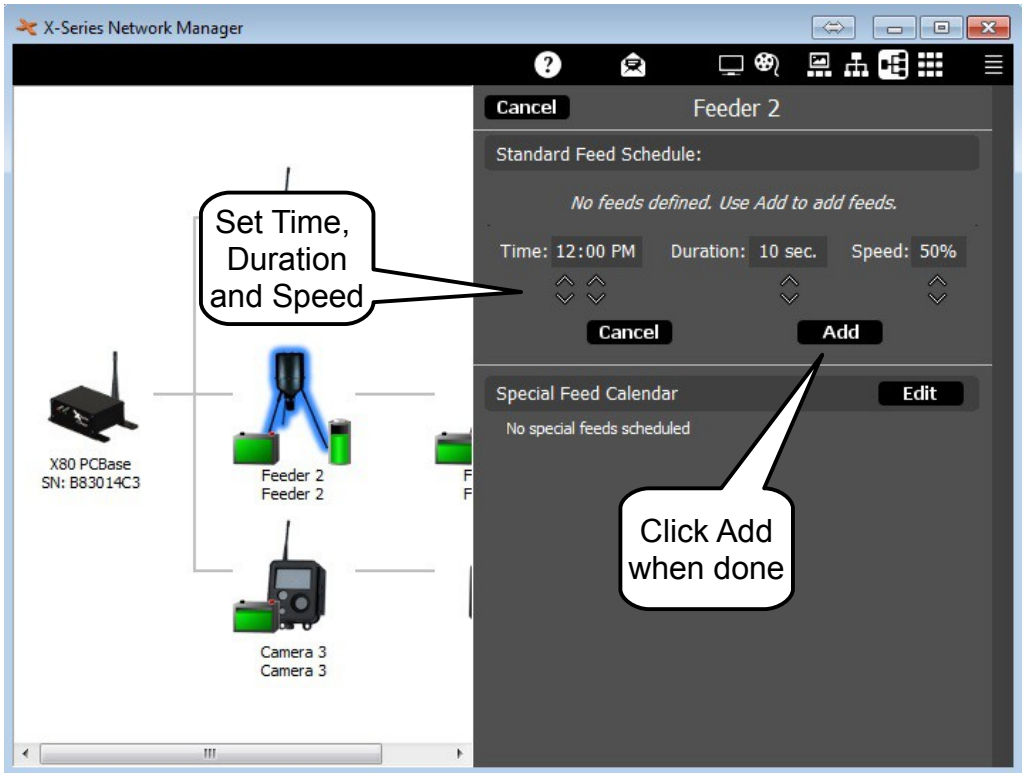
Click on a Feeder icon in the network view to open its control panel.



Click on the Feed Schedule button.

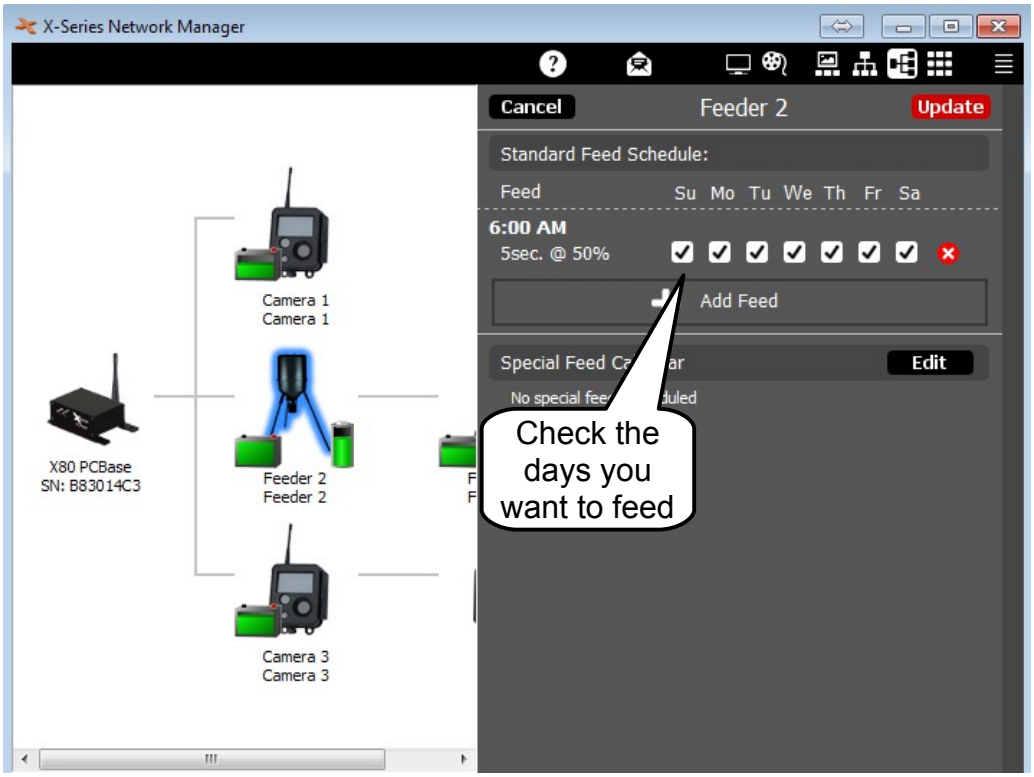


Click on Add Feed to add a scheduled feed.

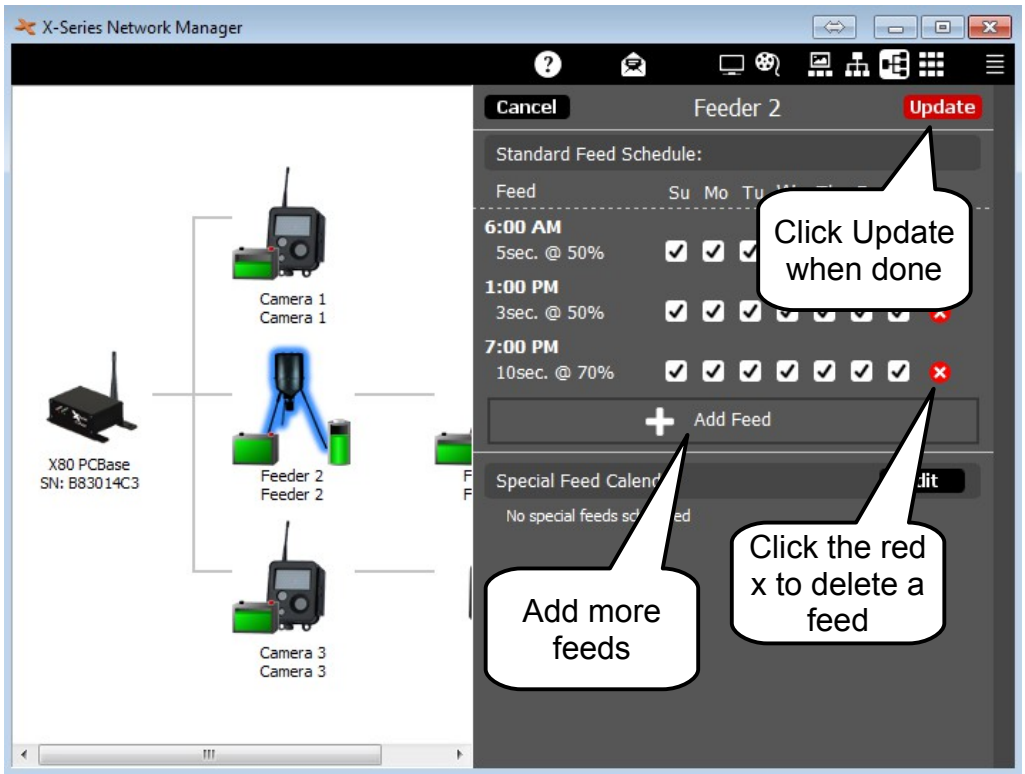


Click on the up / down arrows to set the Time, Duration, and speed.

Click the Add button when done.



The feed will happen on the days that are checked. If you want to disable the feed on a certain day, un-check the box.



Add more feeds if necessary. Each feed may have a different duration and motor speed. Also, each feed may be enabled or disabled on certain days of the week.

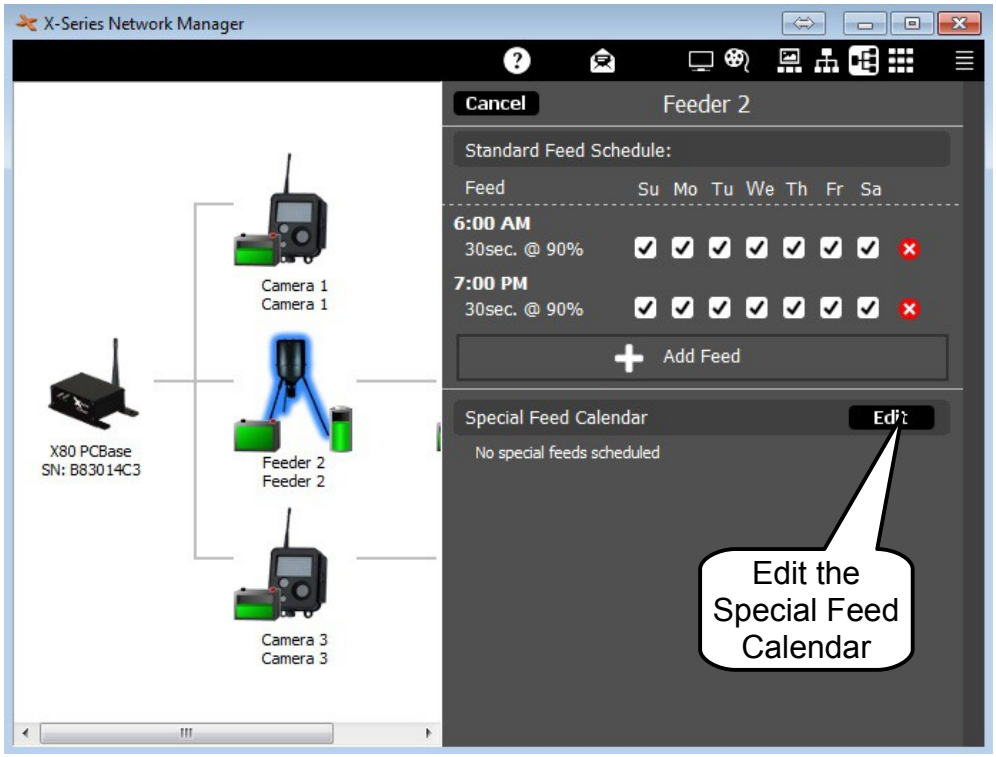
NOTE: To delete a feed click the red x beside the feed time.

Click the Update button when the feed schedule is complete.

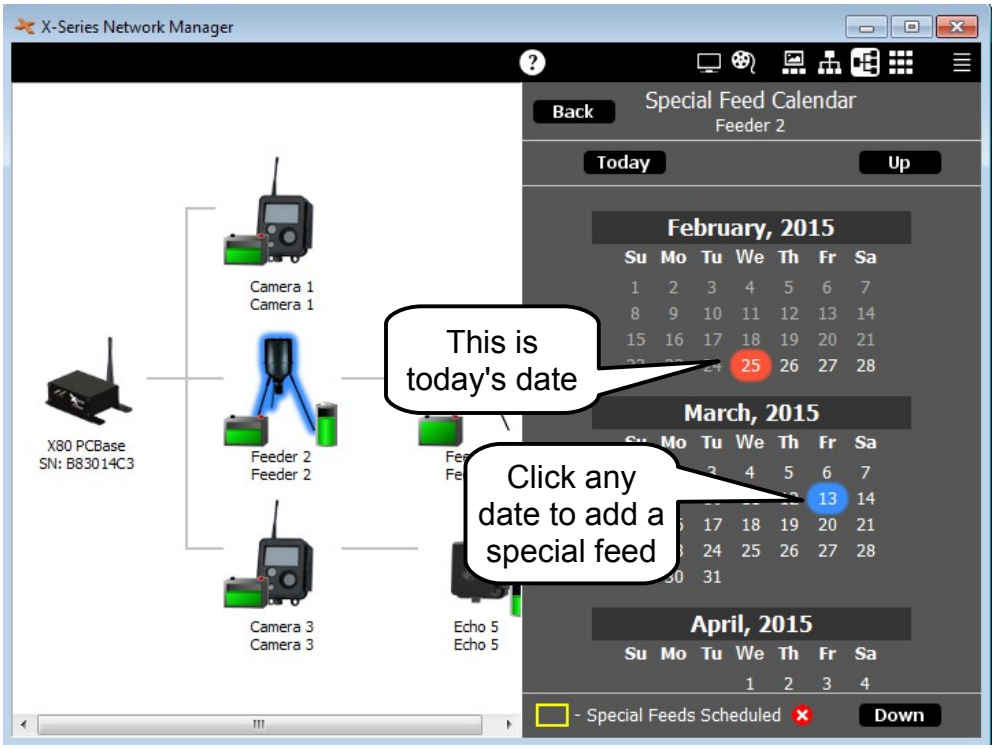
Special Feed Calendar

The Special Feed Calendar may be used to make a unique feed schedule that will only run on the selected calendar day.

This may be useful for setting up a different feed schedule when hunts are scheduled.

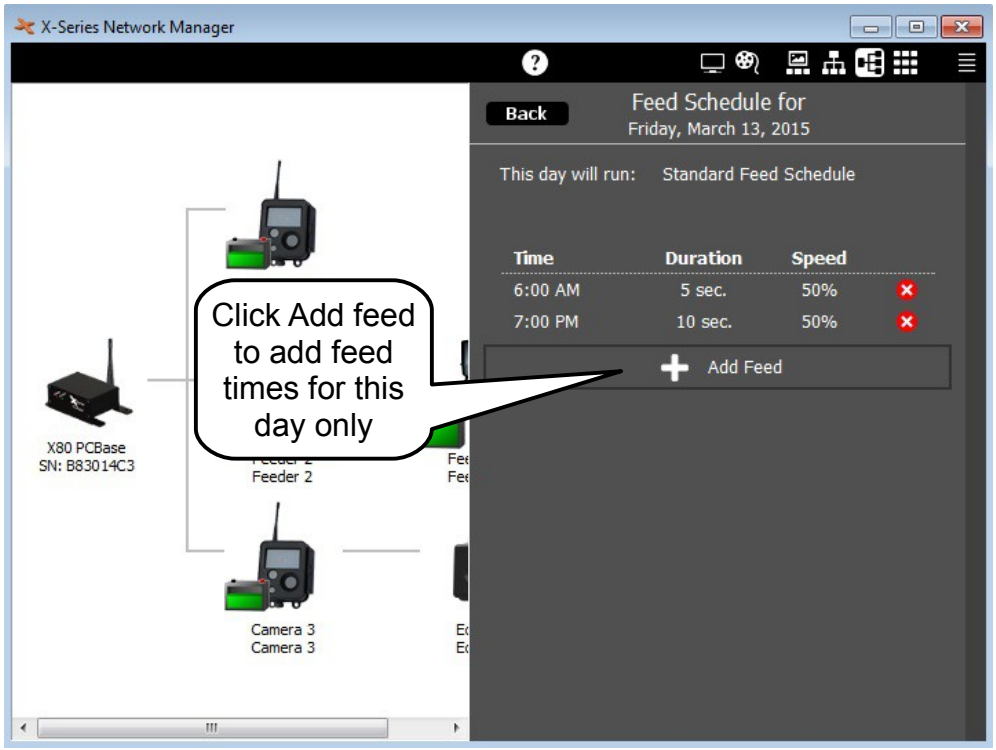


Click the Edit button to schedule Special Feed Calendar days.

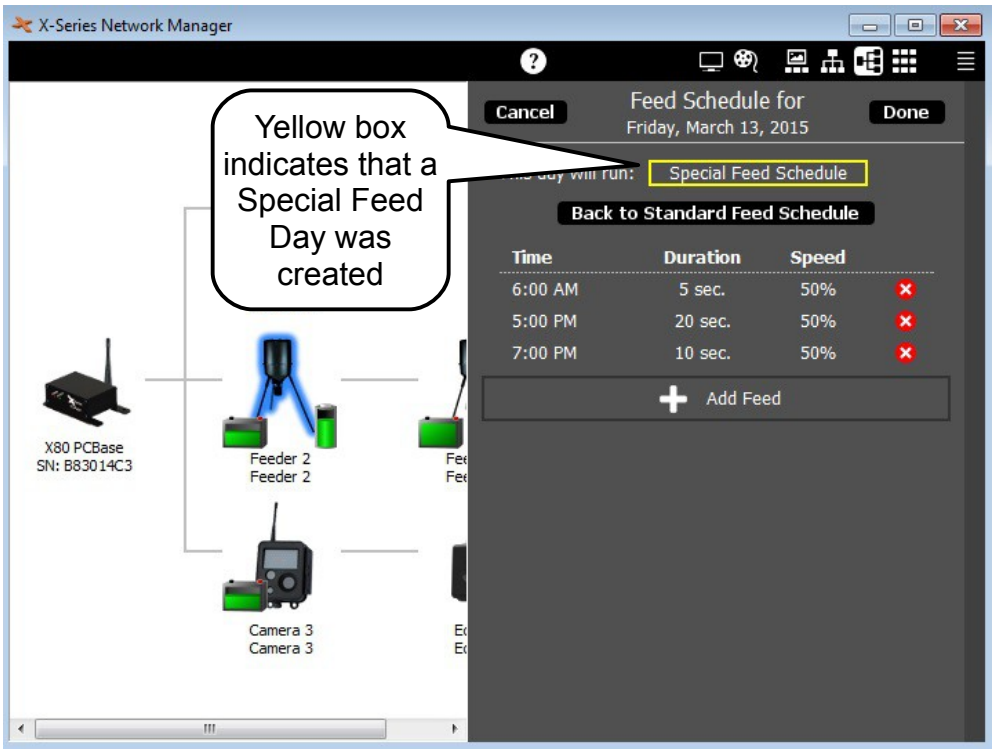


Click the date on which you want to add a special feed day.

If there are standard feeds scheduled for the day you have chosen, they will be listed. You may leave them as they are or delete them by clicking the red x.



Click the Add Feed button to add feeds that will only run on the selected calender day.

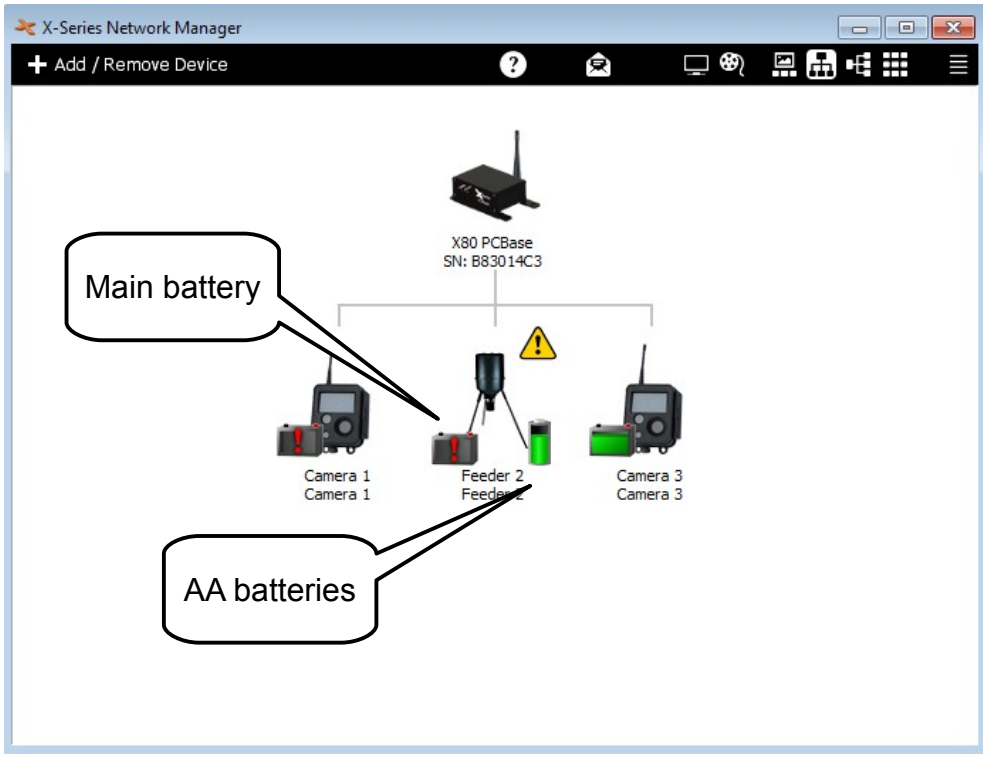


If any changes are made to the Standard Feed Schedule either by adding feeds or deleting feeds, a yellow box will appear indicating that this day is a Special Feed day.

NOTE: To go back to the Standard Feed Schedule, click the button.

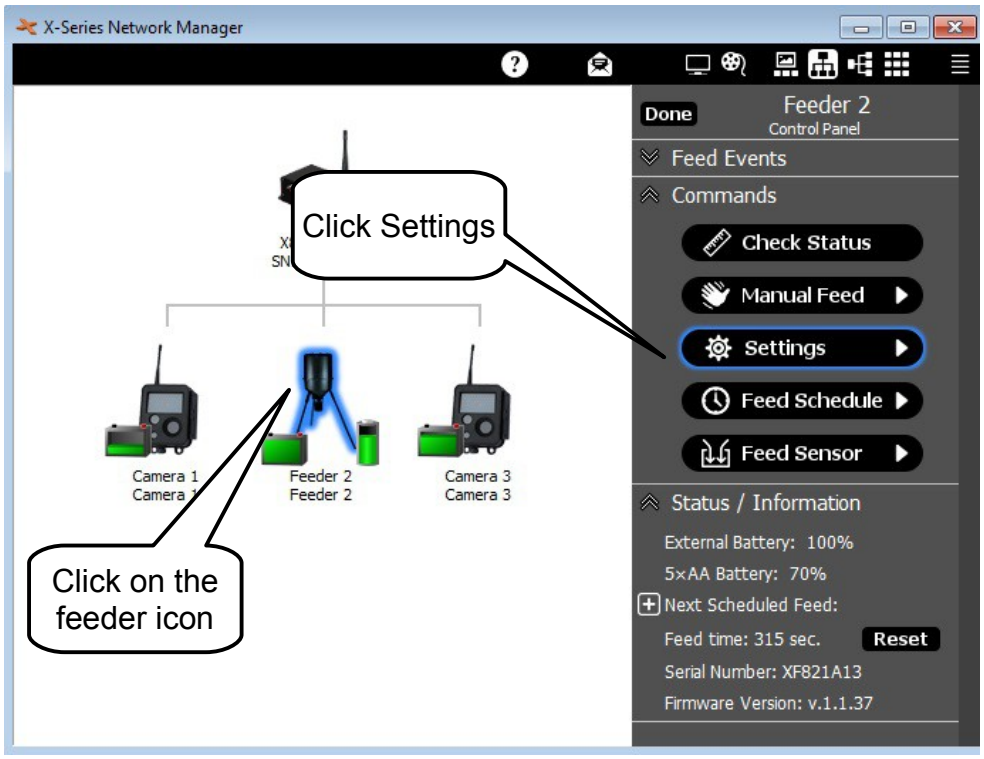
Click the Done button to save the changes and return to the Special Feed Calender. Click the red Update button to transfer the schedule to the feeder.

8. Feeder Status Alerts



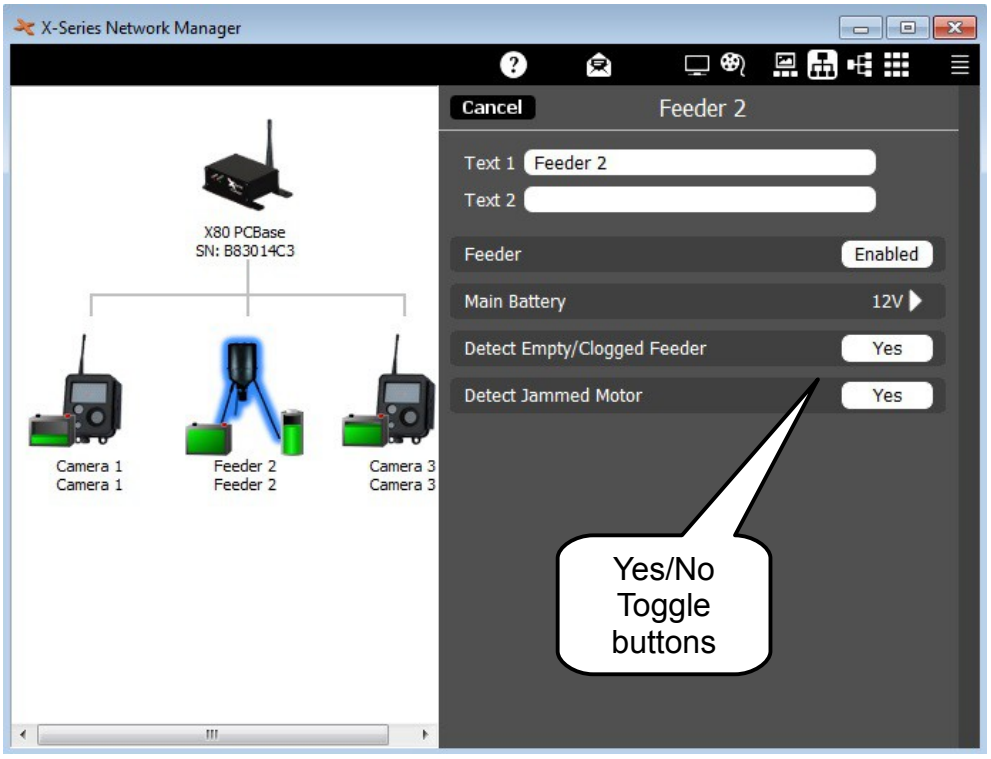
The main battery and AA battery voltages are displayed next to the feeder icon.

A low battery will be indicated by a red exclamation point and a yellow triangle.



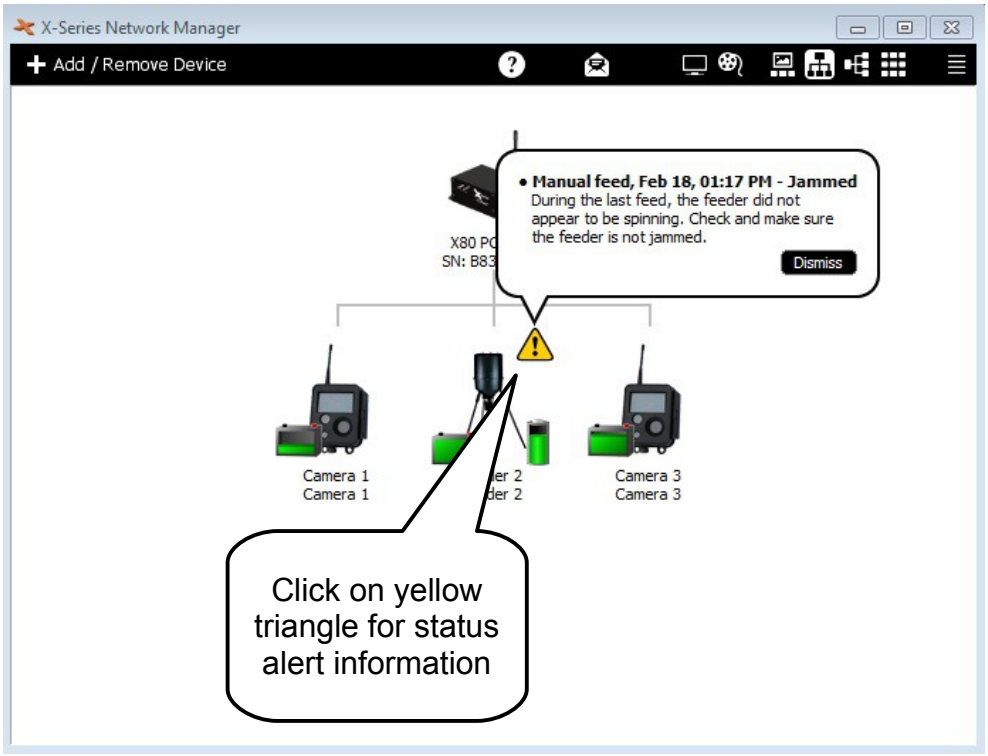
To enable or disable additional status alerts, click on the feeder icon to open the control panel and click on the Settings button.

8. Feeder Status Alerts



Click the Yes/No toggle button to enable status alerts for “Empty/Clogged Feeder” or “Jammed Motor”.

Click the Update button when finished, or cancel to exit without making changes.

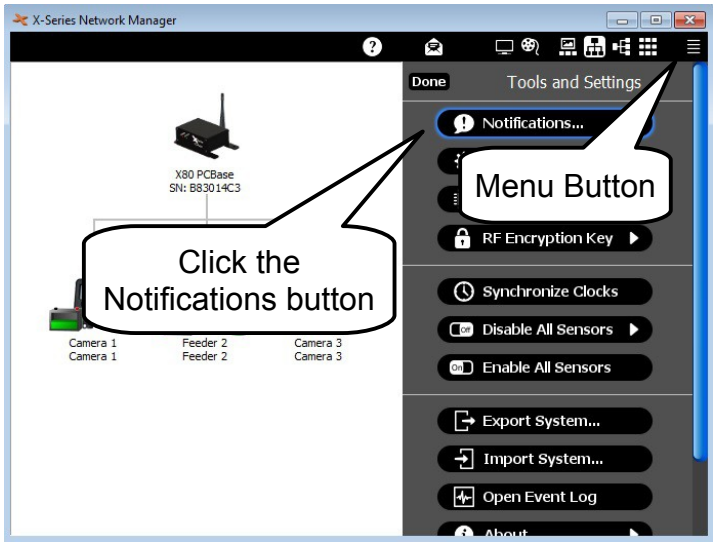

X-Series Network Manager
Add / Remove Device
Manual feed, Feb 18, 01:17 PM - Jammed
During the last feed, the feeder did not appear to be spinning. Check and make sure the feeder is not jammed.
Dismiss
Camera 1
Camera 1
Camera 3
Camera 3
Click on yellow triangle for status alert information

A yellow triangle next to the feeder icon indicates that a status alert has been detected. Click on the yellow triangle to see more information.

Note: Status alerts may also be sent via email.
See *Chapter 9, Email Notifications* for instructions.

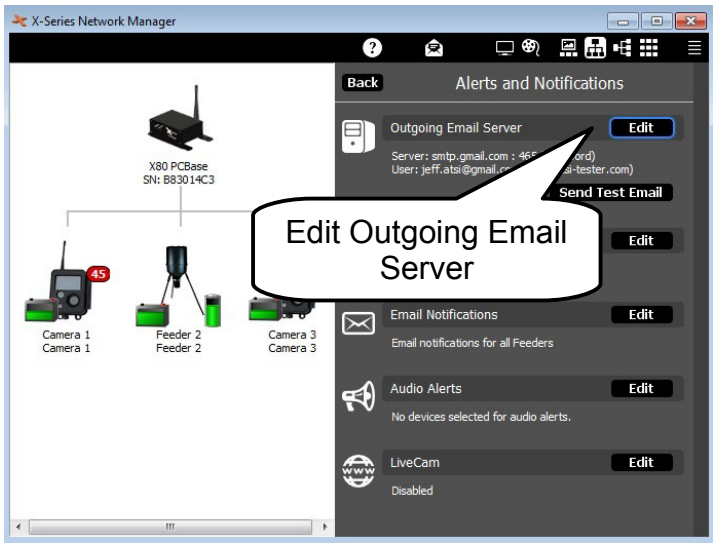
9. Email Notifications

To setup feeder status alerts to be sent automatically by email, follow the instructions below.

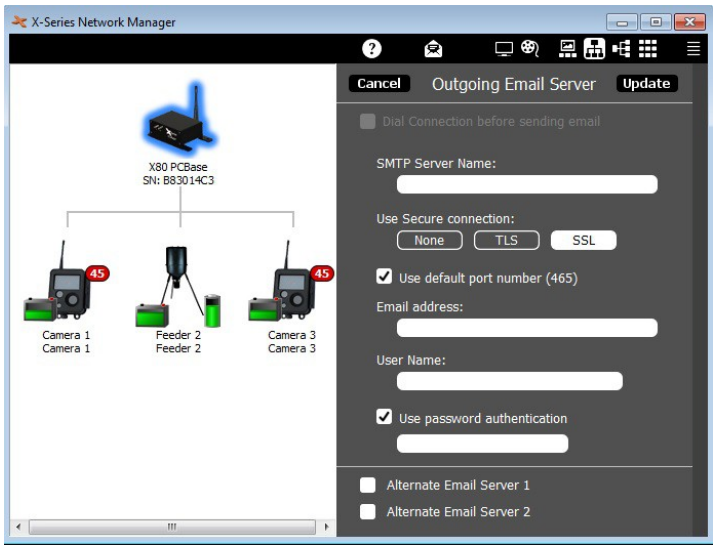


Click the Menu button located in the top right corner of the software window to open the Tools and Settings panel.

Click on the Notifications button.



Click on the Edit button next to Outgoing Email Server.



Enter the email server information. Click Update when done.

Note: If you have a Gmail account, the settings will be as follows:

SMPT Server Name: smtp.gmail.com

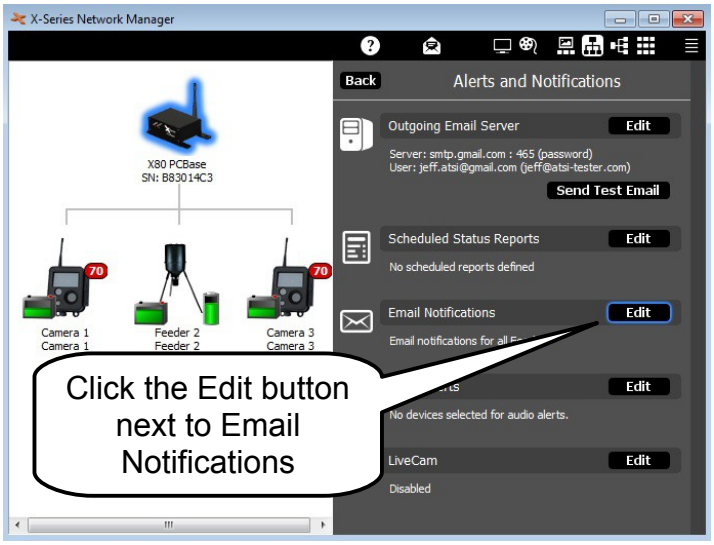
Use Secure Connection: SSL

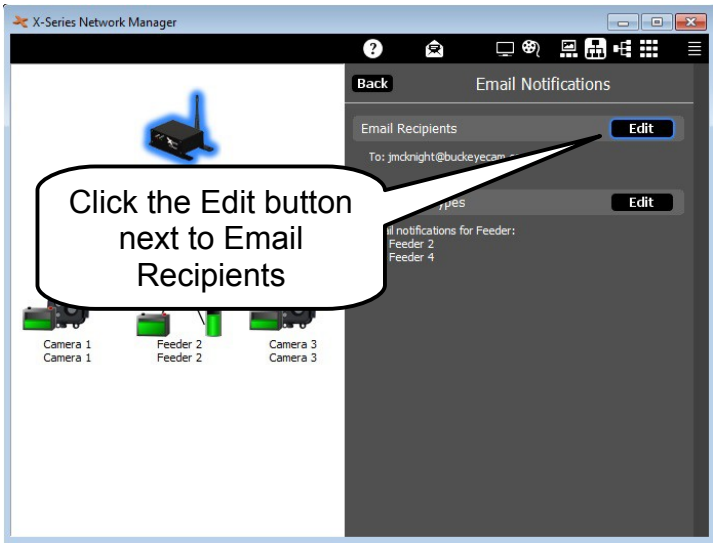
Use default port number (465)

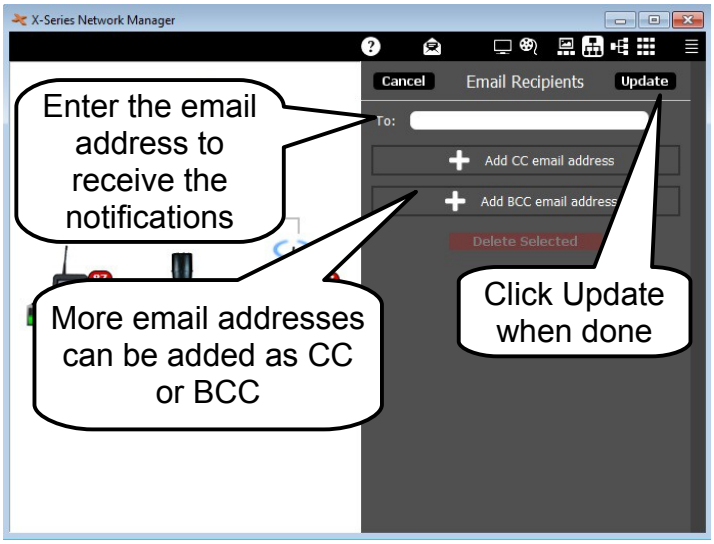
Email Address: (your Gmail address)

Use password authentication

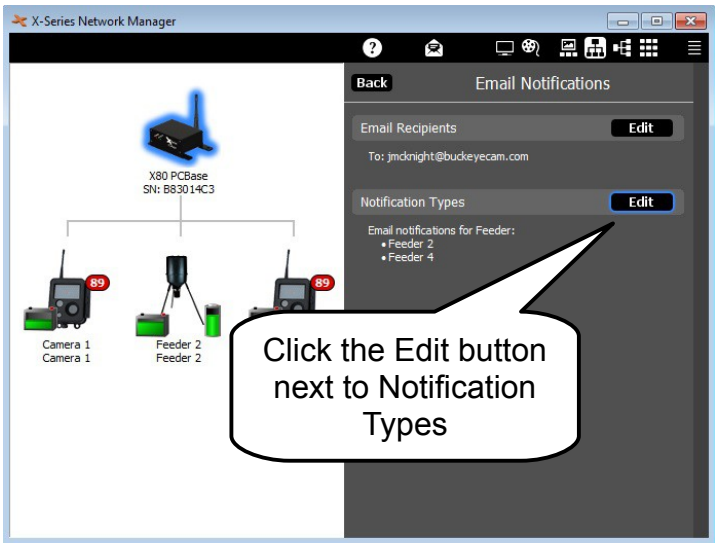
Enter your Gmail password.

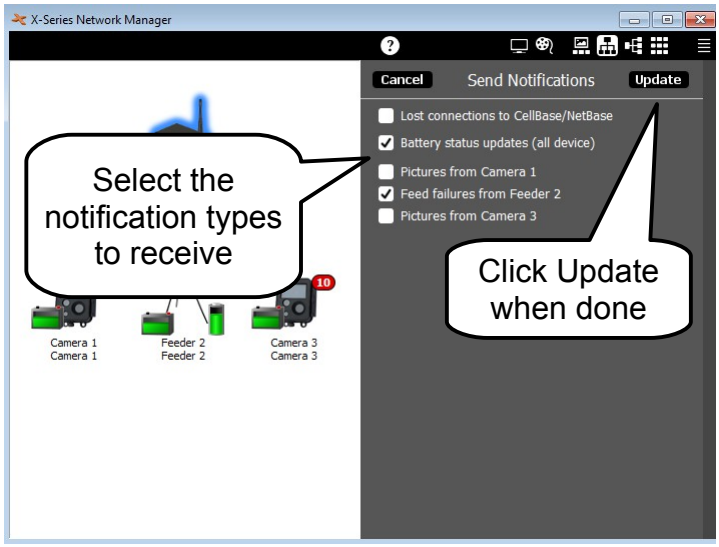

X-Series Network Manager
Back
Alerts and Notifications
Outgoing Email Server
Edit
Server: smtp.gmail.com : 465 (password)
User: jeff.atsi@gmail.com (jeff@atsi-tester.com)
Send Test Email
Scheduled Status Reports
Edit
No scheduled reports defined
Email Notifications
Edit
Edit
No devices selected for audio alerts.
LiveCam
Edit
Disabled
X80 PCBase
SN: B83014C3
Camera 1
Camera 1
Feeder 2
Feeder 2
Camera 3
Camera 3
Click the Edit button next to Email Notifications


X-Series Network Manager
Back
Email Notifications
Email Recipients
Edit
Edit
Feeder 2
Feeder 4
Camera 1
Camera 1
Feeder 2
Feeder 2
Camera 3
Camera 3
Click the Edit button next to Email Recipients


X-Series Network Manager
Cancel
Email Recipients
Update
To:
Add CC email address
Add BCC email address
Delete Selected
Enter the email address to receive the notifications
More email addresses can be added as CC or BCC
Click Update when done

9. Email Notifications





10. Additional Information

Video Tutorials

X-Series Network Manager video tutorials are available at www.buckeyecam.com.

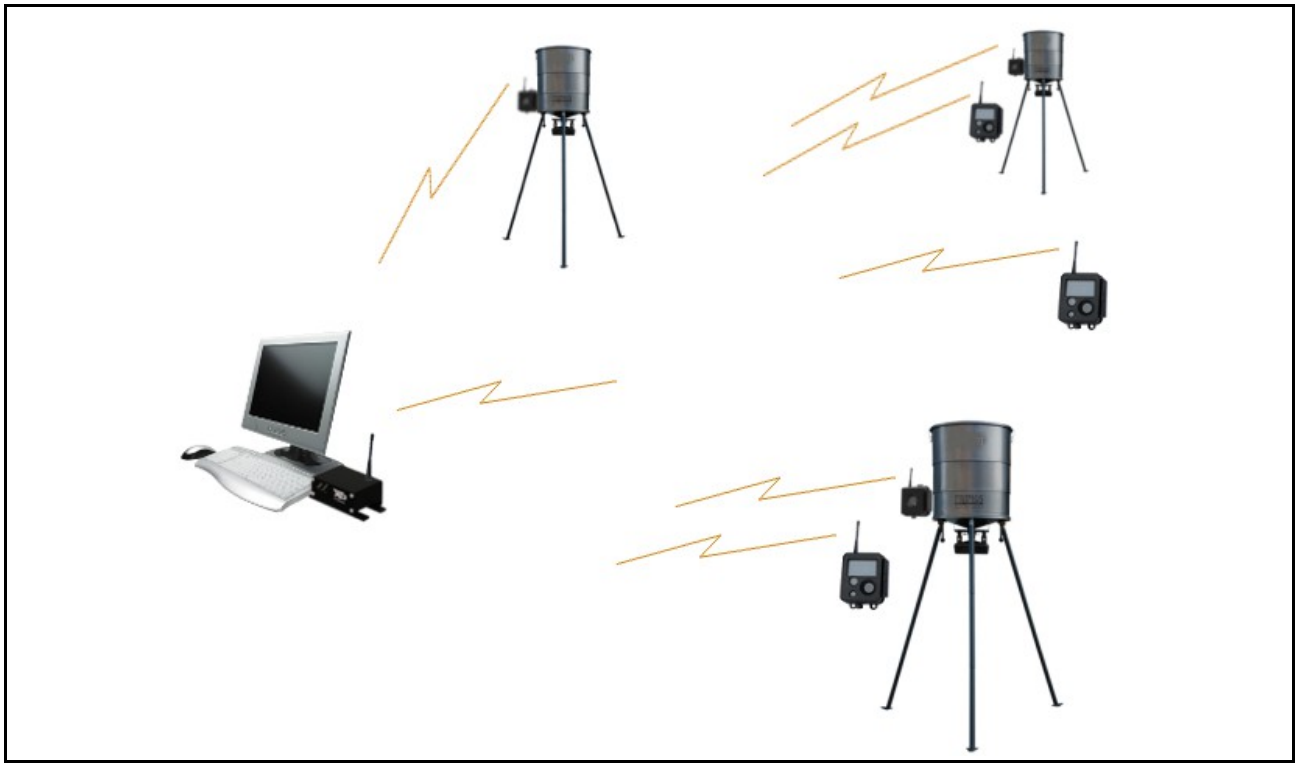
Repeaters and High Gain Antenna Setups

For more information on the different types of repeater setups and high gain antenna options see the *X80 Wireless Camera System User's Manual* available at www.buckeyecam.com.

Adding X80 Wireless Cameras

X80 Wireless Cameras can be added to the feeder network. Place the cameras at the feeders - or anywhere you want - and control everything from one base using the *X-Series Network Manager* software application.

- Control up to 254 devices (feeders + cameras) from one base.
- Pictures or videos may be automatically emailed.
- Pictures or videos may be automatically uploaded to LiveCam website.



11. Warranty and Service

For service or repair, contact ATSI/Buckeye Cam at:

ATSI
8157 US Hwy 50 • Athens, OH 45701
(866) 325-8172 • (740) 592-2874
Fax (740) 594-2875
www.buckeyecam.com

Athens Technical Specialists, Inc. (ATSI) warrants Products (BuckEye Cam™) sold by it and guarantees to correct, by repair or replacement at our option, any defects of material and workmanship which develop under normal and proper use within six (6) months from the date of the original purchase when inspection proves the fault to be of manufacturing. Circuit board components only receive a twelve (12) month warranty. All such Products must be returned to our service center, transportation charges prepaid. This warranty does not apply to any of our Products which have been repaired or altered by unauthorized persons or service centers in any way so as, in our judgment, to injure their stability or reliability, or which have been subject to misuse, negligence, or accident or which have had their serial number altered, effaced or removed.

We will not assume any expense or liability for repairs made by other parties without our written consent. ATSI is not responsible for damage to any associated equipment or apparatus, nor shall we be held liable for loss of profit or other special damages. There is no other guarantee or warranty except as herein stated. The Buyer, his employees, or others assumes all risks and liabilities for the operation, the use and the misuse of the product described herein and agree to defend and to save the seller harmless from any and all claims arising from any cause whatsoever, including seller's negligence for personal injury incurred in connection with the use of the said product.

ATSI reserves the right to discontinue models at any time or change specifications, price or design without notice and without incurring any obligation. The express warranties are in lieu of all other warranties, guarantees, promises, affirmations, or representations, express or implied which would be deemed applicable to the goods sold hereunder. No express warranties and no implied warranties, whether of merchantability, fitness for any particular use or purpose, against infringement, or otherwise (except as to title) other than those expressly set forth herein, shall apply.